

# Writing the Equation of a Quadratic Function

## Method 1: Given Roots

Example: Write the equation of the quadratic with roots 3 and -5

$$x = \underset{-3}{3} \quad \text{and} \quad x = \underset{+5}{-5}$$

$$x - 3 = 0 \quad \text{and} \quad x + 5 = 0$$

$$(x - 3)(x + 5) = 0$$

$$x^2 + 5x - 3x - 15 = 0$$

$$\boxed{x^2 + 2x - 15 = 0}$$

You Do:

1) Roots 6 and 2

$$x = \quad \text{and} \quad x = \quad$$

$$= 0 \quad \text{and} \quad = 0$$

$$( \quad )( \quad ) = 0$$

$$= 0$$

2) Roots -4 and 5